

Serial No.: 09/681,843

Attorney Docket No: MCS-071-00

REMARKS

In response to the final Office Action dated June 18, 2003, claims 1, 8, 15, 16, 18 and 21 have been amended, claim 14 has been canceled, and new claims 29 and 30 have been added. Therefore, claims 1-13 and 15-30 are now in the case. Reexamination and reconsideration of the amended application are requested.

Section 103(a) Rejections

The final Office Action rejected claims 1-20 and 25-28 under 35 U.S.C. § 103(a) as being unpatentable over Viallet et al. (WO 00/13417) in view of McCall et al. (U.S. Patent No. 6,002,430). The Office Action contended that Viallet et al. disclose all elements of the Applicants' claimed invention except for specifically teaching that the camera system comprises "a seamless omni-directional camera system for forming a seamless spherical image, i.e., a seamless omni-directional image." However, the Office Action maintained that McCall et al. discloses this element. Therefore, the Office Action maintained that it would have been obvious to a person of ordinary skill in the art at the time the invention was made "to modify Viallet et al. in using the seamless omni-directional camera system, as per teaching of McCall, because it improves the automated event presentation system by providing the maximum amount of viewing coverage without the bulk of additional cameras."

In response, the Applicants respectfully traverse these rejections based on the amendments to claims 1, 8 and 18 and the legal and technical analysis above and below. The Applicants submit that Viallet et al. and McCall et al. are lacking at least one element of the Applicants' claimed invention. In particular, for independent claims 1 and 8, Viallet et al. and McCall et al. do not disclose, either explicitly or implicitly, the material claimed feature an omni-directional camera system that simultaneously and automatically tracks the event participants to determine the event participant that are speaking using audio analysis. For independent claim 18, Viallet et al. and McCall et al. do not disclose, either explicitly or implicitly, the material claimed feature of filming the event and automatically tracking event participants using a single omni-directional camera system having a single camera to produce the seamless omni-directional image.

Serial No.: 09/681,843

Attorney Docket No: MCS-071-00

Further, Viallet et al. and McCall et al. fail to appreciate the advantages of these claimed features. In addition, there is no technical suggestion or motivation disclosed in Viallet et al. and McCall et al. to define these claimed features. Thus, the Applicants submits that Viallet et al. and McCall et al. cannot make obvious the Applicants' claimed features of an omni-directional camera system that simultaneously and automatically tracks the event participants to determine the event participant that are speaking using audio analysis (as in claims 1 and 8), and filming the event and automatically tracking event participants using a single omni-directional camera system having a single camera to produce the seamless omni-directional image (as in claim 18).

To make a prima facie showing of obviousness, all of the claimed features of an Applicant's invention must be considered, especially when they are missing from the prior art. If a claimed feature is not disclosed in the prior art and has advantages not appreciated by the prior art, then no prima facie showing of obviousness has been made. The Federal Circuit Court has held that it was an error not to distinguish claims over a combination of prior art references where a material limitation in the claimed system and its purpose was not taught therein. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Moreover, as stated in the MPEP, if a prior art reference does not disclose, suggest or provide any motivation for at least one claimed feature of an Applicant's invention, then a prima facie case of obviousness has not been established (MPEP § 2142).

Amended Independent Claims 1 and 8

Amended independent claim 1 of the Applicants' claimed invention includes an automated event presentation system for capturing and viewing an event having event participants. The system includes an omni-directional camera system that provides a seamless omni-directional image of the event and that simultaneously and automatically tracks event participants to determine the event participants that are speaking using audio analysis and films the event. The system also includes an automated online broadcasting system that controls and uses the omni-directional camera system to monitor each of the tracked event participants simultaneously, and broadcasts the event, and a viewer

Serial No.: 09/681,843

Attorney Docket No: MCS-071-00

platform in communication with the automated online broadcasting system that allows a viewer to view the broadcasted event.

Amended independent claim 8 of the Applicants' claimed invention includes a method for filming and recording an event having event participants and presenting the event to a viewer. The method includes filming and recording the event using an omni-directional camera system to provide a seamless omni-directional image that contains each of the event participants. The method further includes automatically determining a location of the event participants in the omni-directional image by using a speaker detection technique to determine the event participants that are speaking. The method also includes providing a user interface that allows a choice of which of the event participants in the omni-directional image to view. The choice (or selection) can be made by at least one of: (a) manually by the viewer; (b) automatically by a virtual director. The method further includes switching instantaneously between views of the event participants in the omni-directional image in response to the choice.

Automatic tracking of the event participants simultaneously using audio analysis to determine which event participants are speaking means that each the number of event participants can be determined and tracked (specification, paragraph 0045, lines 5-7). One way this tracking is performed is by using audio analysis, such as speaker detection techniques (specification, paragraph 0044, lines 2-7). This tracking is performed for each participant individually, simultaneously and without the need for user interaction (i.e., automatically).

Tracking involves two aspects. First, identifying who is talking. Second, modifying the video cameras and microphones of the system to obtain improved audio and video streams of the person or person who are identified as talking. The Applicants' claimed invention performs both these aspects of tracking, i.e., automatically and simultaneously identifying the participants who are talking using audio analysis and modifying the system to obtain the best audio and video of that person or persons.

Serial No.: 09/881,843

Attorney Docket No: MCS-071-00

In contrast, Viallet et al. merely disclose a method and system that requires user intervention (manual and non-automatic) to track only a single person or single group of persons. Specifically, when talking about the background of existing systems, Viallet et al. state that "Il existe egalement des systemes reposant sur la localisation acoustique selon lesquels l'orientation d'une camera est pilotee a partir de l'analyse acoustique de la scene" (Viallet et al., page 2, lines 13-16) and that "[L]'analyse acoustique de la scene est obtenue a partir de plusieurs microphones qui permettent de determiner la direction des sources sonores, voire des sources de parole. La direction des sources de parole etant identifiee, elles pourraient etre selectionnees une a une, puis etre suivies dynamiquement" (Viallet, page 2, lines 17-22). The Applicants interpret this to mean "[T]here are also systems based on acoustic location. In these systems the orientation of a camera is controlled from an acoustic analysis of the scene." Further, "[T]he acoustic analysis of the scene is obtained from several microphones that make it possible to determine the direction of sound sources, even sources of speech. When the direction of the sources is identified, they can be selected one by one, then tracked dynamically" (emphasis added).

In Viallet et al., this selection is performed manually by a user. This is discussed several places in Viallet et al.. For example, Viallet et al. state that a user (through the interface 30) decides whether to obtain sound pickup of a single person or a single group of persons. Specifically, Viallet et al. state "[A]vec une souris 320, l'utilisateur choisit d'obtenir une prise de vue et de son sur l'ensemble des personnes de la scene, en cliquant sur une fenetre nommee "Ensemble", reference E. Avec une souris, l'utilisateur choisit d'obtenir une prise de vue et de son sur une personne de la scene, en cliquant sur une fenetre portant le numero de la personne desiree P1-Pn ou du groupe de personnes" (Viallet et al., page 14, lines 25-32). The Applicants interpret this to mean "[W]ith a mouse 320, the user decides to obtain an image and sound pickup from all of the persons on the scene by clicking on a window titled "ALL", reference E. With a mouse, the user decides to obtain an image and sound pickup on one person on the scene by clicking on a window with the number of the person desired, P1-Pn, or on the group of persons" (emphasis added). Thus, a user manually makes the selection to track a single person or a single group of persons.

Serial No.: 09/881,843

Attorney Docket No: MCS-071-00

Viallet et al. nowhere disclose automatically determining who is talking. All Viallet et al. disclose is pointing individual cameras at the person speaking after a user has selected the person to view. This is not automatic. Moreover, referring to FIG. 1 of Viallet et al., the module that performs scene analysis (40) to control the smaller cameras do not have an audio input. Without an audio input shown and without any mention of how to automatically determine who is speaking using audio analysis, Viallet et al. cannot make obvious the Applicants' claimed feature.

In addition, Viallet et al. fail to provide any motivation, suggestion or desirability to modify their system to use an omni-directional camera system that simultaneously and automatically tracks the event participants to determine the event participants that are speaking using audio analysis. Moreover, Viallet et al. nowhere provide any motivation, suggestion or desirability to modify their system to use an omni-directional camera system that simultaneously and automatically tracks the event participants to determine the event participants that are speaking using audio analysis. Absent any type of teaching, motivation or suggestion, Viallet et al. cannot render the Applicants' claimed invention obvious (MPEP § 2143.01).

McCall et al. adds nothing to the cited combination that would render the Applicants' claimed invention obvious. McCall et al. merely discloses an image-capturing device for obtaining or capturing a spherical image. In short, McCall et al. is a capture device, but does not perform any type of tracking or determination of who is speaking using audio analysis. Consequently, no motivation or suggestion for this claimed feature of the Applicants' claimed invention is provided. Absent this teaching, motivation or suggestion, McCall et al. cannot render the Applicants' claimed invention obvious (MPEP § 2143.01).

Viallet et al. and McCall et al. also both fail to appreciate or recognize the advantages of the Applicants' claimed omni-directional camera system that provides a seamless omni-directional image of the event and that simultaneously and automatically

Serial No.: 09/881,843

Attorney Docket No: MCS-071-00

tracks the event participants to determine the event participants that are speaking using audio analysis. More specifically, the Applicants' claimed omni-directional camera system allows the use of several different user interface features (specification, paragraph 0028, lines 1-2). Neither Viallet et al. nor McCall et al. appreciate these advantages of the Applicants' claimed feature.

The Applicants, therefore, submit that obviousness cannot be established since neither Viallet et al. nor McCall et al. teach, disclose, suggest or provide any motivation for the Applicants' claimed feature of an omni-directional image of the event and that simultaneously and automatically tracks the event participants to determine the event participants that are speaking using audio analysis. In addition to explicitly lacking this feature, Viallet et al. and McCall et al. also fail to implicitly disclose, suggest, or provide motivation for this feature. Further, both Viallet et al. and McCall et al. fail to appreciate advantages of this claimed feature.

Therefore, as set forth in *In re Fine* and MPEP § 2142, Viallet et al. and McCall et al., either alone or in combination, cannot render the Applicants' claimed invention obvious because the references are missing at least one material feature of the Applicants' claimed invention. Consequently, because a prima facie case of obviousness cannot be established due to the lack of "some teaching, suggestion, or incentive supporting the combination", the rejection must be withdrawn. ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984); MPEP 2143.01.

Accordingly, the Applicants respectfully submit that amended independent claims 1 and 8 are patentable under 35 U.S.C. § 103(a) over Viallet et al. in view of McCall et al. based on the amendments to claims 1 and 8 and the legal and technical arguments set forth above and below. Moreover, claims 2-7 and 25-27 depend from amended independent claim 1 and claims 9-13 and 15-17 depend from amended independent claim 8 and are also nonobvious over Viallet et al. in view of McCall et al. (MPEP §

Serial No.: 09/681,843

Attorney Docket No: MCS-071-00

2143.03). The Applicants, therefore, respectfully request reexamination, reconsideration and withdrawal of the rejection of claims 1-13, 15-17 and 25-27.

Amended Independent Claim 18

Amended independent claim 18 of the Applicants' claimed invention a method for displaying at least a portion of a seamless omni-directional image capturing an event occurring within an event environment. The method includes filming the event and automatically tracking event participants using a single omni-directional camera system having a single camera to produce the seamless omni-directional image. The method further includes transmitting the omni-directional image from a broadcasting platform to a viewer platform using a computer network and using the viewer platform to allow a viewer to select which portion of the omni-directional image the viewer would like to view. The method also includes switching instantaneously between views of the omni-directional image by presenting a desired portion of the omni-directional image as selected by the viewer.

In contrast, Viallet et al. merely disclose a system and method that uses at least two separate cameras systems for different purposes. Namely, one camera system is used for capturing or filming the participants and a second camera system is used for performing scene analysis.

Specifically, as shown in FIG. 1, Viallet et al. uses a first camera 10 for capturing purposes. The "resources audiovisuelles (capteurs) 10", which the Applicants interpret to mean "audiovisual resources (sensors)", are comprised of audio and visual sensors (Viallet et al., page 10, lines 13-14). Viallet et al. states that "[L]es capteurs video sont constitutes par une ou plusieurs cameras filmant la scene", which the Applicants interpret to mean that "the video sensors are comprised of one or more cameras filming the scene" (Viallet et al., page 10, lines 16-18; emphasis added).

In addition, as shown in FIG. 1, Viallet et al. also disclose using a second camera 60 ("analyse camera fixe (ou mobile)" or "fixed (or mobile) analysis camera") for scene

Serial No.: 09/881,843

Attorney Docket No: MCS-071-00

analysis (i.e., the second camera is a scene analysis device. Viallet et al. states that "on utilise une camera d'analyse fixe 60, (la camera peut etre mobile), qui permet de fournir le signal requis servant a effectuer une analyse de la scene visuelle observee", which the Applicants interpret to mean "a fixed analysis camera 60 is used (the camera can be mobile), which allows the required signal to be furnished that is used to perform an analysis of the observed visual scene" (Viallet et al., p.10, line 33 to p.11, line 2).

Thus, while the Applicants' claimed invention includes filming and tracking using a single omni-directional camera system, Viallet et al. disclose at least two camera systems. Namely, Viallet et al. use a first camera (the "resources audiovisuelles (capteurs) 10") for capturing purposes and a second camera ("analyse camera fixe (ou mobile) 60" for scene analysis.

In addition, Viallet et al. fail to provide any motivation, suggestion or desirability to modify their system to use a single omni-directional camera system. To replace one of the camera systems with a single omni-directional camera system such that the system of Viallet et al. has an omni-directional camera system and the standard type of camera system would require calibration. As would be apparent to one having ordinary skill in the art, the calibration required would be time-consuming and labor-intensive. This alone would be a detriment to an artisan replacing one of the camera systems in Viallet et al. with an omni-directional camera system.

It is also not obvious to replace both of the camera systems in Viallet et al. with a single omni-directional camera system. Replacing both camera systems would require a nontrivial change in the architecture of the Viallet et al. system. Namely, in FIG. 1, the scene analyzer 40 would require both an input and an output to the audiovisual resources (sensors) 10. The system shown in FIG. 1 has only an output to the audiovisual resources (sensors) 10. Thus, there is no teaching, motivation or suggestion in Viallet et al. to use a single omni-directional camera system in place of its two camera systems used for separate purpose. Absent any type of teaching, motivation or suggestion, Viallet et al. cannot render the Applicants' claimed invention obvious (MPEP § 2143.01).

Serial No.: 09/881,843

Attorney Docket No: MCS-071-00

McCall et al. adds nothing to the cited combination that would render the Applicants' claimed invention obvious. McCall et al. merely discloses an image-capturing device for obtaining or capturing a spherical image. Although the camera system in McCall et al. is a single camera system, its output is a spherical image. As is well known in the art, a spherical image is different from an omni-directional image. In particular, a spherical image images an entire room, floor to ceiling. The spherical image contains a 360 degree horizontal view and a 360 degree vertical view. Conversely, the omni-directional image, as used in the Applicants' claimed invention, contains a 360 degree horizontal view but less than a 100 degree vertical view. In a video conferencing application, this means that for an omni-directional image pixels are not wasted on the ceiling and floor – places where meeting participants are unlikely to be.

McCall et al. neither disclose nor provide motivation for providing an omni-directional image because their intent is to capture an entire scene. Specifically, the camera in McCall et al. is designed to capture images to make a person feel as if they are there. This works well for outdoor photography (such as the example used in McCall et al.). However, for videoconferencing applications, precious pixels are wasted by capturing the floor and ceiling. Specifically, in videoconferencing applications, the people and props the people use are important, not the scenery. Thus, it would be counterintuitive to waste pixels and money imaging everything in the scene.

Consequently, no motivation or suggestion for this claimed feature of the Applicants' claimed invention is provided. Absent this teaching, motivation or suggestion, McCall et al. cannot render the Applicants' claimed invention obvious (MPEP § 2143.01).

Viallet et al. and McCall et al. also both fail to appreciate or recognize the advantages of the Applicants' claimed feature of filming the event and automatically tracking event participants using a single omni-directional camera system having a

Serial No.: 09/881,843

Attorney Docket No: MCS-071-00

single camera to produce the seamless omni-directional image. More specifically, the Applicants' omni-directional camera system allows the use of several different user interface features (specification, paragraph 0028, lines 1-2). Neither Viallet et al. nor McCall et al. appreciate these advantages of the Applicants' claimed feature.

The Applicants, therefore, submit that obviousness cannot be established since neither Viallet et al. nor McCall et al. teach, disclose, suggest or provide any motivation for the Applicants' claimed feature of filming the event and automatically tracking event participants using a single omni-directional camera system having a single camera to produce the seamless omni-directional image. In addition to explicitly lacking this feature, Viallet et al. and McCall et al. also fail to implicitly disclose, suggest, or provide motivation for this feature. Further, both Viallet et al. and McCall et al. fail to appreciate advantages of this claimed feature.

Therefore, as set forth in *In re Fine* and MPEP § 2142, Viallet et al. and McCall et al., either alone or in combination, cannot render the Applicants' claimed invention obvious because the references are missing at least one material feature of the Applicants' claimed invention. Consequently, because a prima facie case of obviousness cannot be established due to the lack of "some teaching, suggestion, or incentive supporting the combination", the rejection must be withdrawn. ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984); MPEP 2143.01.

Accordingly, the Applicants respectfully submit that amended independent claim 18 is patentable under 35 U.S.C. § 103(a) over Viallet et al. in view of McCall et al. based on the amendments to claim 8 and the legal and technical arguments set forth above and below. Moreover, claims 19, 20 and 28 depend from amended independent claim 18 and are also nonobvious over Viallet et al. in view of McCall et al. (MPEP § 2143.03). The Applicants, therefore, respectfully request reexamination, reconsideration and withdrawal of the rejection of claims 18-20 and 28.

Serial No.: 08/881,843

Attorney Docket No: MCS-071-00

The Office Action rejected claims 21-23 under 35 U.S.C. § 103(a) as being unpatentable over Kannes (U.S. Patent No. 5,382,972) in view of Ono (U.S. Patent No. 6,133,941). The Office Action stated that Kannes discloses all elements of the Applicants' claimed invention except for "not specifically teaching to transmit the image from the computer to the remote module using a computer network." However, Office Action contended that Ono teaches such a computer network. Therefore, the Office Action contended that "it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kannes in transmitting the image from the computer to the remote module using a computer network . . . because it improves the operability."

In response, the Applicants respectfully traverse these rejections based on the following legal and technical analysis below. The Applicants submit that Kannes and Ono lack at least one claimed feature of the Applicants' claimed invention. In particular, with regard to independent claim 21, neither Kannes nor Ono disclose, either explicitly or implicitly, the material claimed feature of a virtual director module that determines which of the multiple camera views to display by applying a set of expert video production rules based at least in part on a display history of an event participant.

Further, both Kannes and Ono fail to appreciate the advantages of this claimed features. In addition, there is no technical suggestion or motivation disclosed in Kannes or Ono et al. to define these claimed features. Thus, the Applicants submit that Kannes and Ono cannot make obvious the Applicants' claimed invention.

Amended Independent Claim 21

Amended independent claim 21 of the Applicants' claimed invention includes an automated event presentation system for capturing an event. The system includes a high-resolution omni-directional camera system that provides an omni-directional image of the event, the omni-directional image containing multiple camera views, and an automated

Serial No.: 09/681,843

Attorney Docket No: MCS-071-00

online broadcasting system that is capable of broadcasting the omni-directional image over a computer network. In addition, the system includes a viewer platform in communication with the computer network that receives the omni-directional image. The system also includes a virtual director module within the automated online broadcasting system that determines which of the multiple camera views within the omni-directional image to display on the viewer platform. The virtual director module determines this by applying a set of expert production rules based at least in part on a display history of an event participant.

Expert video production rules are rules that the virtual director module uses to make decisions. For example, one such expert video production rule determines which camera view is an output camera view. Other examples of expert video production rules are found in the Applicants' specification (paragraph 0051 and paragraph 0052). These expert production rules include keeping the camera view on a person even if another person begins talking if the camera has only been on the first person for a short amount of time (specification, paragraph 0051). In addition, these rules include switching the camera view off a person who is talking if that person has been talking for a long period of time (specification, paragraph 0052). These expert production rules are based in part on a display history of an event participant. In other words, the rules are based on how long an event participant has been displayed on the viewer platform.

In contrast, as noted in the Office Action, Kannes merely uses a simplistic rule that selects a camera based on which event participant is currently speaking. On the other hand, the Applicants' claimed set of expert video production rules based on at least in part on a display history of an event participant are much richer. This set of expert production rules provides a more professional and pleasing product for a viewer to watch.

Moreover, Kannes does not implicitly suggest or provide motivation for this claimed feature of the Applicants' claimed invention. Specifically, there is no suggestion or motivation because Kannes merely teaches the simplistic rule of displaying whoever is currently speaking. In fact, Kannes makes no mention of applying expert video production

Serial No.: 08/881,843

Attorney Docket No: MCS-071-00

rules that are based at least in part on a display history of an event participant.

Ono adds nothing to the cited combination that would render the Applicants' claimed invention obvious. Ono merely discloses a camera control system and method to remotely control a camera over a computer network. However, nowhere does Ono discuss the Applicants' claimed feature of a virtual director module that applies expert video production rules based at least in part on a display history of an event participant. Consequently, no motivation or suggestion for this feature of the Applicants' claimed invention is provided. Absent this motivation or suggestion, Ono cannot render the Applicants' claimed invention obvious (MPEP § 2143.01).

In addition to lacking this claimed feature of the Applicants' invention, both Kannes and Ono fail to appreciate or recognize the advantages of the Applicants' claimed feature of the virtual director module that applies a set of expert video production rules based at least in part on a display history of an event participant. Specifically, the Applicants' claimed virtual director module allows the system to "decide on the best camera view to display to a viewer" (specification, paragraph 0049, lines 1-2). This virtually eliminates "labor costs associated with broadcasting a meeting (specification, paragraph 0009, lines 5-7). Neither Kannes nor Ono discuss or appreciate these advantages of the Applicants' claimed feature of a virtual director module that uses a set of expert video production rules based at least in part on a display history of an event participant.

The Applicants, therefore, submit that obviousness cannot be established since both Kannes and Ono lack a material claimed feature of the Applicants' invention. Namely, the Applicants' claimed feature of a virtual director module that determines which of the multiple camera views to display by applying a set of expert video production rules based at least in part on a display history of an event participant is not taught by Kannes and Ono. In addition to explicitly lacking this feature, both Kannes and Ono fail to implicitly disclose this claimed feature. In particular, Kannes and Ono lack any suggestion and fail to provide any motivation for this claimed feature. Further,

Serial No.: 09/881,843

Attorney Docket No: MCS-071-00

Kannes and Ono fail to appreciate advantages of this claimed feature. Therefore, as set forth in *In re Fine* and MPEP § 2142, Kannes and Ono simply cannot render the Applicants' claimed invention obvious. Consequently, because a prima facie case of obviousness cannot be established due to the lack of "some teaching, suggestion, or incentive", the rejection must be withdrawn. MPEP 2143.01; ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

Accordingly, the Applicants respectfully submit that independent claim 21 is patentable under 35 U.S.C. § 103(a) over Kannes in view of Ono based on the legal and technical arguments set forth above and below. Moreover, claims 22 and 23 depend from independent claim 21 and are also nonobvious over Kannes in view of Ono (MPEP § 2143.03). The Applicants, therefore, respectfully request reexamination, reconsideration and withdrawal of the rejection of claims 21-23 under 35 U.S.C. § 103(a) as being unpatentable over Kannes in view of Ono.

The Office Action rejected claim 24 under 35 U.S.C. § 103(a) as being unpatentable over Kannes in view of Ono and further in view of Bruno et al. (U.S. Patent No. 5,710,591). The Office Action contended that the combination of Kannes and Ono disclose or suggest most of the elements of the Applicants' claimed invention except that the combination "differs from the claimed invention in not specifically teaching to provide negative switching that allows switching to a camera view of a person speaking before [he] begins to speak." However, the Office Action maintained that Bruno et al. teach this feature. Thus, the Office Action contended that "it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Kannes and Ono in switching to a camera view of a person speaking before [he] begins to speak . . . because it makes user friendly for subsequent retrieval and processing."

In response, the Applicants respectfully traverse this rejection based on the legal and technical analysis above and below. The Applicants submit that Kannes, Ono and Bruno et al. lack at least one claimed feature of the Applicants' invention. In particular,

Serial No.: 09/681,843

Attorney Docket No: MCS-071-00

Kannes, Ono and Bruno et al. do not disclose, either explicitly or implicitly, the material claimed feature of a switching module capable of providing negative switching that allows switching to a camera view of a person speaking before the person begins to speak.

Further, Kannes, Ono and Bruno et al. fail to appreciate the advantages of this claimed feature. In addition, there is no technical suggestion or motivation disclosed in Kannes, Ono and Bruno et al. to define this claimed feature. Thus, the Applicants submit that Kannes, Ono and Bruno et al. cannot make obvious the Applicants' claimed feature.

Dependent Claim 24

Claim 24 of the Applicants' invention includes a switching module that is capable of providing negative switching. This negative switching allows the switching to a camera view of a person speaking before that person begins to speak. In other words, before a person begins to speak the camera view shows that person that will speak.

In contrast, Kannes, Ono and Bruno et al. all fail to disclose or suggest this claimed feature of the Applicants' invention. The Office Action maintained that Bruno et al. show this claimed feature at column 4, line 62 through column 5, line 7. In these passages, Bruno et al. disclose a "voice-activated switching mode" for "controlling the video signal" (col. 4, lines 62-63). In this embodiment of Bruno et al., a control unit (MCU) "will display the image of the loudest speaking user/conferee on each of the other users' workstations" (col. 4, lines 64-65). In addition, an "image of the previous speaker's location will be displayed on the current speaker's screen" (col. 4, lines 65-67). Thus, the current speaker has displayed on his screen an image of the previous speaker while the other users have displayed on their screens an image of the current speaker.

In another embodiment, Bruno et al. disclose a "voice-activated switching mode" where the "MCU switches the video signal from the current speaker's location only

Serial No.: 09/881,843

Attorney Docket No: MCS-071-00

when that speaker [i.e., the current speaker] stops talking" (col. 5, lines 1-3). In other words, "the MCU will change the video display only after the current speakers stops talking and a new speaker begins talking" (col. 5, lines 3-5).

Neither of these embodiments of Bruno et al. disclose or suggest the Applicants' claimed negative switching. Bruno et al. use voice-activated switching. In other words, only after a person's voice is detected does the MCU switch to that current speaker. Because it is voice-activated, it is impossible for the MCU to switch views before it is activated by a voice. Bruno et al. simply cannot switch to a camera view of a person speaking before that person begins to speak. Conversely, the Applicants' claimed negative switching switches camera views before the next speaker begins speaking. This is different from the voice-activated switching disclosed in Bruno et al..

In addition to lacking this claimed feature of the Applicants' invention, Kannes, Ono and Bruno et al. fail to appreciate or recognize the advantages of the Applicants' claimed feature of the switching module including negative switching. Specifically, the Applicants' claimed switching module including negative switching "allows a camera view to be switched without delay. Even a short delay between the time when a person begins speaking and the time when the camera view shows the speaker can be quite distracting to a viewer. This camera switching latency can distract the viewer to the point that the viewer has a negative viewing experience" (specification, paragraph 0054, lines 2-5). Kannes, Ono and Bruno et al. do not discuss or appreciate these advantages of the Applicants' claimed feature of a switching module capable of providing negative switching.

In addition to explicitly lacking this feature, Kannes, Ono and Bruno et al. fail to implicitly disclose this claimed feature. In particular, Kannes, Ono and Bruno et al. lack any suggestion and fail to provide any motivation for this claimed feature. Further, Kannes, Ono and Bruno et al. fail to appreciate advantages of this claimed feature. Therefore, as set forth in *In re Fine* and MPEP § 2142, Kannes, Ono and Bruno et al. simply cannot render the Applicants' claimed invention obvious. Consequently,

Serial No.: 09/881,843

Attorney Docket No: MCS-071-00

because a prima facie case of obviousness cannot be established due to the lack of "some teaching, suggestion, or incentive", the rejection must be withdrawn. MPEP 2143.01; ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

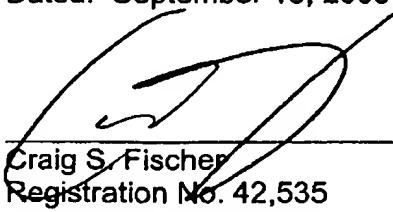
Accordingly, the Applicants respectfully submit that independent claim 24 is patentable under 35 U.S.C. § 103(a) over Kannes and Ono in view of Bruno et al. based on the legal and technical arguments set forth above and below. The Applicants, therefore, respectfully request reexamination, reconsideration and withdrawal of the rejection of claim 24 under 35 U.S.C. § 103(a) as being unpatentable over Kannes and Ono in view of Bruno et al..

Conclusion

In view of the amendments to claims 1, 8, 18 and 21 and the arguments set forth above, the Applicant submits that claims 1-13 and 15-30 of the subject application are in immediate condition for allowance. The Examiner, therefore, is respectfully requested to withdraw the outstanding rejections of the claims and to pass all of the claims of this application to issue.

In an effort to expedite and further the prosecution of the subject application, the Applicants kindly invite the Examiner to telephone the Applicants' attorney at (805) 278-8855 if the Examiner has any comments, questions or concerns, wishes to discuss any aspect of the prosecution of this application, or desires any degree of clarification of this response.

Respectfully submitted,
Dated: September 18, 2003



Craig S. Fischer
Registration No. 42,535
Attorney for Applicants

RECEIVED
CENTRAL FAX CENTER
SEP 22 2003

OFFICIAL

Serial No.: 09/881,843

Attorney Docket No: MCS-071-00

LYON & HARR, L.L.P.
300 East Esplanade Drive, Suite 800
Oxnard, CA 93030-1274
Tel: (805) 278-8855
Fax: (805) 278-8064